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ON THE OPHTHALMOSCOPE—ITS USES AND METHOD OF APPLICATION.

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It was my intention to communicate to your journal notes and illustrations of the most striking and distinctive cases only of a long series of ophthalmoscopic observations. In deference, however, to your suggestion, that at present little is to be found explanatory of this discovery except in transatlantic publications, I shall, at the risk of repeating what is to some of your readers quite familiar, preface my future papers with one upon the origin and application of the instrument, of one of the many forms of which you have the accompanying drawing.

By means of it, the fundus of the globe and all the space between it and the iris are as clearly submitted to ocular inspection through the dilated pupil as are the anterior textures to the unassisted eye, allowance being made for the refracting influence of the transparent media of the eye which is examined.

The first suggestion pointing towards it was made by M. Prevost in the year 1810. He demonstrated that the luminous appearance from the pupil of many inferior animals never is seen in total darkness, is not at all the result of passion or volition, and depends wholly upon the reflection of light which has entered the eye from without.* I have not seen his statements in full, but they are quoted and alluded to by many later writers on this subject, and are to be found in the Bibliothéque Britannique, t. 19th.

A similar luminous appearance has also been observed in the human eye. This appearance was observed by Beer as early as 1792, in some cases of amaurosis, and was thought by him to be diagnostic of a peculiar form of this disease, to which he gives the name of "cat's eye" (katzenauge). I remember certainly, some

* Gruethuisen, Rudolphi and Müeller have instituted similar investigations with the same result. Ruete Krankheiten des menschlichen Auges. 1st Leiferung, p. 26.

ten years ago, seeing a very decided red glare* from the pupils of a lady with whom I was conversing. I mentioned it to her, and she informed me that she was excessively near-sighted. Her pupils were very large. That the myopy in this lady was not owing to amaurosis, is proved by her sight continuing in the same condition as at that time.

The first attempt to obtain, by artificial aids, from an eye in its normal condition, this luminous reflection, was made in 1846, by Mr. Wm. Cumming; and inasmuch as his experiments naturally led the way to the multiplied and improved contrivances by which much more than he attempted is now accomplished, I quote from vol. 29th, p. 284, of the Medico-Chirurgical Transactions, as follows:

"The object of the present paper is to show that the healthy human eye is equally, or nearly equally, luminous as the eye of the cat, dog, &c., when observed under favorable circumstances, and the application of the abnormal appearance or want of this luminosity, to the detection of changes in the retina and posterior part of the eye.

"The reflection from the posterior part of the human eye may be seen in the following manner: Let the person whose eye is to be examined, be placed at the distance of ten or twelve feet from a gas or other bright light; the rays of light must fall directly on his face; all rays passing laterally of his head must be intercepted by a screen, placed half way between the light and the eye examined. If the reflection be bright, it will be at once seen from any spot between the light and the screen. The following observations were made in two rooms; in one of which was a gas light, the other completely darkened. The person whose eye was to be viewed was placed in the dark room, five feet from a half closed door opening into this room; he directly faced the light, also at the distance of four or five feet from the door.

"The appearance of the reflection was in most cases extremely brilliant, when seen from a position between the door and light. In some, it was at once obvious, with the door wide open; in others, it was seen with great difficulty, and not till every ray of light passing to the side of the iris was carefully intercepted by the door on the one side and the hand or a book on the other. The reflection was always seen much more readily and brilliantly when the eye was turned slightly to the side, and the rays of light passed through the pupil obliquely. On passing to the other side of the door, the luminosity was seen with greater difficulty. In this position, it is necessary to have the eye turned to the side, to exclude all rays by the hand, except those passing directly to the eye. In this way the reflection may be seen distinctly at the distance of eight inches.

"In the majority of cases, however, it may be seen as follows: Let the person under examination sit or stand eight or ten feet from

* Lehre der Augenkrankheiten, band ii. Wien. 1792. This glare is especially easy of observation in cases of congenital absence of the iris. A case of this kind is related by Behr in Hecker's Annalen, 1839.

a gas light, looking a little to the side; standing near the gas light, we have only to approach as near as possible to the direct line between it and the eye to be viewed, at once to see the reflection. Or, in a dark room, a candle being placed four or five feet from the eye, if we approach the direct line between them, we shall be able at once to see it in many cases. If solar light be admitted through a nearly closed shutter into a dark room, the luminosity may be seen when the pupil is tolerably dilated, the patient standing five or six feet from the aperture, and the observer occupying the position before indicated.

"These, then, are the circumstances necessary for seeing the luminosity. *a.* That the eye must be at some distance from the source of light, the distance being greater in proportion to the intensity. *b.* That the rays of light diffused around the patient (and sometimes around the eye itself) should be excluded. *c.* That the observer should occupy a position as near as possible to the direct line between the source of light and the eye examined; hence it is sometimes necessary for the observer to stand obliquely, that his eye may approach nearer to the direct line.

"The appearance of the reflection itself not only varies much in color and intensity in different persons, but also from the circumstances under which it is seen, viz., the greater or less intensity of light, the position of the eye examined, and the distance at which it is viewed.

"When the reflection is seen under the influence of a dim light, as that from a candle, or a few solar rays, a red lurid glare, like that from a dull coal fire, is observed, evidently proceeding from the bottom of the eye, and though not distinctly concave, yet conveying the idea of concavity. The character of the reflection thus seen by a faint light, at the distance of two or three feet, is very uniform, and does not present much variety of tint.

"When the eye receives rays from a good bright light ten feet distant, and we stand near the light, the reflection is then seen extremely brilliant, presenting a fine metallic lustre, and varying from a bright silver or golden, to a decided red tint—the latter being the more usual color. While viewing the reflection at this distance, it sometimes undergoes a distinct change, suddenly altering from a copper or red color to a silver tint. This happens sometimes in consequence of a slight movement of the eye, but not infrequently is observed without any movement having taken place.

"Although the reflection is more readily seen in an eye with a large pupil, its lustre does not depend upon this circumstance. In two eyes, with pupils of equal diameter, the intensity of the reflection frequently varied greatly. In one case, in which the reflection was very dusky in appearance, and the pupil small, atropine was dropped into the eye. I then observed that, though the extent of luminosity was increased, it still retained the same dusky hue. The greater facility with which the reflection is seen when the eye is directed slightly away from the light, appears to depend on the more patulous condition of the pupil.

"On approaching within a few inches of the eye, the reflection is not visible, for, before our eye can be brought within range of the reflected rays, the incident rays of light are excluded. On placing before the eye examined a black card with an aperture the size of the iris, the intensity of the reflection was observed to be somewhat diminished. In cases in which the lens had been removed, the reflection was indistinct at a distance, but was rendered somewhat clearer by the aid of a double convex lens placed before the eye examined; but at two or three feet distant, the reflection was as obvious as in cases in which the lens was present."

The experiments of Mr. Cumming were, in 1847, followed by those of M. Brücke, professor of physiology at Vienna, which may be considered to be another step towards the ophthalmoscope as it now is. The method of M. Brücke* is this: The surgeon holding in one hand a wax candle, places himself at the distance of eight or ten feet in front of the patient, the flame of the candle being just below the level of the eye to be examined. With the other hand the surgeon holds, between his own eyes and the light, a screen, the upper edge of which should be exactly even with the summit of the flame, in order to protect his own eyes from the direct light, while at the same time he looks over the edge of the screen into the pupil of the patient. The patient, with the eyelids widely opened, should now look at the most distant objects in front of him, changing from one to another near it, or else gently move the eyes until the pupil presents to the observer a bright red color, and the iris has a greenish tinge. If the patient looks at the flame, this reflection is lost.

In 1851, an instrument called an orthoscope, by Dr. Czermack, was described in the Prager Vierteljahrschrift fur pract Heilkunde, vol. 4th, the intention of which was to "prevent, as much as possible, the refraction and deviation of the rays of light by the anterior surface of the cornea." This was accomplished by putting the eye under water, the refractive power of which is very nearly the same as that of the cornea and aqueous humor. It appears to have been used in the clinique of Professor Arlt, who availed himself of a small gutta percha case with a plane glass front, which easily fitted upon the face, and prevented the running out of the water. By this means much of the refracting agency of the transparent media is obviated, and a view of the interior facilitated. The possibility of this was suggested still earlier (Le Cat. traité des sens. Amst. 1744, p. 174). The practical inconveniences must have prevented the general use of the orthoscope, even if had not been superseded by the ophthalmoscope. This device, the orthoscope, seems to have been foreshadowed more than a hundred years ago by Mery, who, while holding a cat under water, saw "the color of the bottom of the eye and the bloodvessels ramifying thereon."

Five years later, this was verified by Lattêre, who demonstrated

* Leuchter der menschlichen Augen. Müeller's Archives, 1849.

that the refracting power of the cornea is neutralized by covering it with water.*

Mr. T. Wharton Jones, in an article dated October, 1854,† states that seven years before, a Mr. Babbage showed him a model of an instrument contrived for looking into the interior of the eye. It consisted of a bit of plane mirror with the silvering scraped off at two or three small spots in the middle, fixed within a tube at such an angle, that the rays of light, falling on it through an opening in the side of the tube, were reflected into the eye to be observed, and to which the one end of the tube was directed. The observer looked through the clear spots of the mirror.

To M. Helmholtz, professor of physiology in the university at Hoenigsberg, is due the credit of first devising and bringing fully to the notice of the profession, an apparatus expressly designed, and in some cases competent for a distinct view of the internal textures of the eye. It is called by M. Helmholtz an augenspiegel (eye mirror), is very complex in its construction, inconvenient for application, and when properly applied, less effective than any one I have had the opportunity of using. The peculiarity which (its clumsiness excepted) distinguishes it from those now most employed is, that the light is reflected back to the eye of the patient from a plane transparent glass mirror composed of three laminæ placed obliquely in front of a chamber, the inner surface of which is blackened. Through this chamber and mirror the observer looks into the eye of the patient, unavailingly, however, except as to the crystalline lens, and perhaps the anterior portion of the vitreous humor, because, although the light is polarized and partially reflected, many of its rays are absorbed and not reflected, while the triple glass mirror itself obstructs the vision of the observer. One is obliged also, with this instrument, to look through a concave lens, except only when the eye he is looking at is extremely myopic.‡

To this instrument Dr. E. Jaeger gave greater effect by substituting for the plain transparent mirror a concave silvered one, from the centre of which a small circular portion of the amalgam has been removed.

To this instrument, the chief objection is the distance from the eye of the observer to the mirror itself, by which the field of vision is very much diminished; and its great advantage, the intensifying of the light by reason of the concavity and silvering of the mirror.§ It has also the convenience of enabling the observer to dispense with the screen, which is required with the apparatus of M. Helmholtz and others.

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* Der Augenspiegel, seine Anwendung und Modificationen nebst Beiträgen zur Diagnostik innerer Augenkrankheiten von Dr. Van Trigt. Aus dem Holländischen mit Zusätzen bearbeitet von Dr. C. H. Schauenberg, Docenten an der Universität zu Bonn, 1854.

† British and Foreign Med. Chir. Rev.

‡ The ophthalmoscope of Helmholtz is of interest as the earliest, and is minutely described in the Beschreibung eines Augenspiegels zur Untersuchung der Netzhaut im menschlichen Auge von Helmholtz mit 1 Kupfertafel. Berlin, 1851. An abstract of this will be found in No. 26 of Braithwaite's Retrospect, taken from the Monthly Journal of Medical Science, July, 1852

§ Staar und Staarenoperationen nebst anderen Beobachtungen und Erfahrungen. Wien. 1854.

In 1853 or 1852*, M. Coccius, of Leipsic, very essentially simplified and improved upon the original ophthalmoscope of Helmholtz, by substituting for the transparent triple mirror, a silvered mirror perforated centrally with a hole corresponding to the pupil; by dispensing altogether with the darkened chamber between the eye of the observer and the mirror, and by placing obliquely between the lamp and the mirror a convex lens to concentrate the light upon the mirror. By this instrument a much stronger light is thrown upon the retina, an obstruction removed, and a wider range given to the eye of the observer. In the practical application of the ophthalmoscopes of Helmholtz and Coccius, attention must be paid to the following difference: With the ophthalmoscope of Coccius, the mirror is to be placed in the same position as with that of Helmholtz, but the lens must be so placed between the mirror and the lamp that the light, which has been concentrated by the lens upon the mirror, shall, when reflected from it, form upon the face a square of reflection (viereckigen schien) in the centre of which is a black spot, which black spot must, during the examination, fall in the centre of the pupil; while with the mirror of Helmholtz is obtained only a small clear image of a flame (helle Flammenbildchen).†

Lastly, in 1854, Dr. Anagnostakis, of Athens, divested the instrument of all its unnecessary appendages, rendering it extremely simple, sufficiently effective for a full examination of the fundus of the globe in most cases, and immediately available to the most inexperienced observer.

It was introduced by him at the clinique of M. Desmarres in Paris, and has been since very extensively adopted upon the continent and in Great Britain.

Dr. Anagnostakis has been accused of claiming as his own original invention this simplified ophthalmoscope, of which an example had been already shown to him at the clinique of Dr. Graefe, of Berlin, as the invention of Professor Coccius, of Leipsic. But I have before me an engraving, issued at Leipsic by Prof. Coccius himself, of his own ophthalmoscope, which has all the clumsiness of that of Helmholtz, and is rendered more effective as to its illuminating power only by the interposition of a convex lens between the plane mirror and the lamp.

From his own statement,‡ he appears to have entertained the idea that instead of the plane mirror and convex lens, a concave mirror might be used, but finally to have satisfied himself theoreti-

* Med. Times and Gazette, Sept. 10th, 1853.

† Dr. Adolph Coccius uber die Anwendung des Augenspiegels nebst Angabe eines neuen instruments mit einer Tafel. Leipzig.

‡ In a letter to Dr. C. Bader he says, "In the year 1853, I drew a parallel between the advantages resulting from the use of a slightly concave and perfectly plane mirror joined with a convex lens. I preferred the latter, and have shown (p. 31, in a book upon the ophthalmoscope *opuscule remarquable*) that optically both forms of mirror are alike, but that the plane mirror joined with a convex lens furnishes more advantages in an examination near the eye." Brit. and For. Med. Chir. Rev., April, 1855. From which I infer, not that Prof. Coccius ever used or advised a concave mirror, but that he thought of it. J. H. D.

cally that the combination of the plane mirror and convex lens is to be preferred. I conceive, therefore, that to Dr. Anagnostakis belongs at least the credit of demonstrating the superiority of the instrument which he claims as his own. I translate his description of it as follows :*

"My ophthalmoscope consists simply of a round concave mirror, having a diameter of two inches, and a focal distance of four and a half inches, the silvered surface being protected by a blackened copper plate. The centre of this mirror is perforated in a round flaring (evasée) hole, of a diameter of one quarter of an inch.† A small handle completes the instrument.

Now, strictly speaking, for an ophthalmoscope two conditions only are required, and they are :

1st. To throw into the fundus of the globe a large amount of light.

2d. To give to the observer an opportunity to look directly into the bottom of the globe thus illuminated, and obtain a clearly defined view of the surfaces presented.

Both of these conditions are fulfilled by this instrument.

1. *The illumination.*—It is unnecessary to demonstrate that such a mirror must have very great illuminating power, as every body is familiar with the fact that light is concentrated by concave mirrors.

It might at first thought be supposed that the concentration of the light from the mirror upon the eye of the patient could be obtained only by placing the mirror at a certain invariable distance, and that therefore, if the observer changed the distance between his own eye and that of the patient, he would be compelled to take another mirror of a different focal distance. It is not so. With concave mirrors the length of the conjugate focus is in the inverse ratio of the distance between the mirror and the point of illumination.

The nearer the lamp approaches to the mirror, the more the focal distance is elongated, and the reverse. If, then, the observer is obliged to recede from the eye at which he is looking, he has only to bring the lamp nearer to himself in the ratio of his increased distance from the eye. He will, of course, place the lamp farther off if he wishes to look nearer.

A few trials are required to find the proper distance, and one is guided to it by the gradual increase or lessening of the reflection. It is accomplished when there is thrown upon the cornea a small oblong brilliant reflection, which is the inverted image of the flame.

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* Essai sur l'exploration de la Retine et des milieux de l'œil sur le vivant, au moyen d'un nouvel ophthalmoscope, par A. Anagnostakis, Docteur en Médecine de la Faculté d'Athénes. Paris, 1854.

† At the Royal London Ophthalmic Hospital, Moorfields, an ophthalmoscope is preferred, the central aperture of which is smaller, and made by scratching off the silvering, leaving the glass intact, and the focal distance of which is six inches. Brit. and For. Med. Chir. Rev., April, 1855.

The crossing of the rays proceeding on all sides from the oblique surface of the mirror prevent any apparent shadow resulting from the central aperture. J. H. D.

The focal distance of the mirror being thus variable at pleasure, this instrument accommodates itself to the examination of either myopic or presbyopic eyes, and even of eyes wanting the crystalline lens, since it admits of being used at various distances.

Nor is it necessary, for a successful exploration, that the reversed image of the flame should be presented upon the cornea as accurately as has now been supposed. Provided that the fundus of the globe is distinctly seen, the reflection is of course sufficiently accurate.

A screen is not required with this instrument.

2. *The perception of objects.*—It is evident that from so strong an illumination should be obtained the clearest possible view of objects. As the eye of the observer is placed close behind the central hole of the mirror, the field of vision is enlarged as he recedes from the eye at which he is looking. The flaring, cup-shaped (evasée) form of the whole allows one to look obliquely."

Both before and since the introduction of the ophthalmoscope of Dr. Anagnostakis, many others have been brought forward under different names, although in the preceding sketch I have restricted myself to the mention of the few who seem to me to have essentially contributed to bring the instrument to its present condition of simplicity, general applicability and effectiveness.*

Its simplicity is its most striking and commendable characteristic, especially as compared with the earlier inventions, which were so complex as to be almost indescribable.† It is generally applicable, and in all cases effective, because, while with an argand or solar burner the illuminating power fully suffices for the deeper textures, it is adapted to the crystalline lens and adjacent tissues by merely using a smaller flame. To the instrument of Dr. Anagnostakis I find but one objection, and that arising very naturally from his desire to simplify. This objection is the want of any contrivance for placing a lens between the mirror and the eye of the patient. The use of a convex lens in examining a presbyopic, or of a concave lens in examining a myopic eye, is often required by an observer whose own vision is normal, and yet, unless an assistant is present, one hand may be required to raise the lid of the patient while the other holds the ophthalmoscope.

To meet this want I have caused to be appended to the mirror of Dr. Anagnostakis a support for a lens similar to that of Dr. Jaeger,

* The following is a list of some of the gentlemen who have invented, improved or altered this instrument: Mr. Babbage, of England, 1847; M. Helmholtz, Berlin, 1851; Dr. C. G. T. Ruete, Leipsic, 1852; MM. Follin et Natchet, Paris, 1852; Prof Adolph Coccius, Leipsic, 1853; M. Epkens, an instrument maker at Amsterdam, 1853; Dr. Edward Jaeger, Vienna, 1854; Dr. A. Anagnostakis, Athens, 1854; Dr. E Williams, Cincinnati, U. S., and Mr. J. Dixon, London, Dr. R. Ulrich, Gottingen, 1853; Inspector Myenstein, Gottingen, 1854; Dr. Graefe, Berlin, 1853. Most of the above named have written upon this subject, and in addition to them, T. Wharton Jones, W. R. Sanders, W. Mackenzie, C. Bader, and Bransby Roberts, T. Spencer Welles, F. C. Donders and M. Van Gondever of Utrecht, Dr. Van Trigt of Holland, translated into German by C. H. Schauenberg of Bonn, Dr. Kussmaul of Heidelberg, &c.

† The earliest detailed description of Helmholtz's ophthalmoscope I put into the hands of a very ingenious optician, with a request that he would make one. Six months later, he replied that it was wholly unintelligible.

but differing from it in allowing the distance between the mirror and lens to be varied at pleasure.*

The instrument, as represented in the accompanying drawing, is in fact nearly identical with that now employed by Dr. Jaeger at Vienna, but different in this very important respect, that the mirror had nearly double the area of Dr. Jaeger's, and, in consequence, a much greater illuminating power. It is also a screen for the eye of the observer, which that of Dr. J.'s is not.

The drawing hardly requires explanation.

The mirror A is reduced one third in diameter. The observer holding its handle in his left hand and placing his eye immediately behind the mirror, looks through its central aperture and also through the lens B, into the pupil of the eye of the patient C.

The flame of the lamp should generally be a little in advance of, and quite near to, the ear of the patient, and always in the same plane with the eye of the patient and of the observer. The distance at which the mirror is to be placed from the eye of the patient depends upon the focal distance of the mirror itself and the refracting powers of the eye examined and the lens used. With the mirror of Anagnostakis, it varies from three and a half to five inches.

Everything being arranged in this way, and the eye of the patient looking forward, a reflection from the mirror will be seen upon the cornea. By varying a little the distance of the mirror, it will be seen where the strongest, best defined reflection is obtained. A still slighter change of position will now bring from the fundus of the eye a red glare, and immediately, with or without another slight movement, the different textures of the retina will be in view.

For the examination of the crystalline lens a wax candle suffices. For the deeper textures an argand burner, or which is better, a solar burner, from which the light is stronger and whiter.†

I have also appended to my lamp, behind the flame, a concave mirror of about six inches diameter and ten inch focus, by which the light may be concentrated upon the mirror of the ophthalmoscope, and a still more vivid illumination obtained. This arrangement is needed only when the examination of the retina or vitreous humor is to be made behind a partially opaque lens or capsule, for which purpose it is not possible to obtain too much light.

This concave mirror behind the lamp has, of course, the same effect in intensifying the light of the lamp upon the mirror of the ophthalmoscope that a convex lens has before the lamp. With a plane ophthalmoscopic mirror, this concave mirror behind the lamp must give the same result much more conveniently than it is accomplished by Coccius and others through the means of a lens attached to the mirror of the ophthalmoscope.

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* It is the contrivance of Mr. Wightman, philosophical instrument maker, Cornhill.

† To obviate the effect of the red and yellow rays, and approximate the light to that of day, Mr. James Dixon, of London, and Dr. W. Mackenzie, of Glasgow, advise a glass chimney of a bluish tinge.

A very satisfactory ophthalmoscope can always be extemporized by scratching off from near the centre of a fragment of common looking glass a little of the silvering. For the examination of a myopic eye, this often suffices very well. A presbyopic eye requires either a concave mirror behind the lamp or a convex lens between the lamp and the bit of looking glass, and possibly also between the looking glass and the eye of the patient another convex lens, for the refracting power of a presbyopic eye is often so little, that without some compensating arrangement externally to it, the observer is compelled to recede too far from it for distinct vision.

Moreover, the retina being usually seen through the refracting magnifying influence of the crystalline lens, an eye which has lost the lens will certainly require, with the most effective ophthalmoscope, the interposition of a convex lens, unless the other transparent media have an unusually high refracting power.

The pupil of the eye to be examined must have been dilated previously, and for this purpose atropine is much the most convenient and effective agent. The examination should be made in a darkened room, free from reflecting surfaces.

It is also directed, by some writers,* that a horizontal tablet be placed behind and above the head of the observer, by looking at the divisions of which, the patient is to change the position of his eye and bring successively each portion of the retina under the view of the observer. Now, to most eyes which are examined in this way, the tablet must be invisible, and when the patient cannot, as in most cases he can, change, at will, the position of his eye, it is possible for the observer, by a little change in the position of his eye and ophthalmoscope, to get a view of different parts of the retina with sufficient distinctness.

But why is not the fundus of the eye visible without an ophthalmoscope? Through a dilated pupil a large amount of light is received upon the retina; and moreover, the interior of the globe is otherwise partially illuminated. According to experiments by Volkmann, light is admitted into the eye through the sclerotic, iris and ciliary processes. As to the sclerotic, this is demonstrable by concentrating upon it the diffused light of day by means of a large convex lens. It would seem, therefore, that the reflecting surfaces of the place of entrance of the optic nerve, of the red vessels and of the retina itself, should be ordinarily visible.

That they are not so, is due to the refraction of the transparent media. If from a certain point without an eye rays of light pass into it, so that passing through the refracting media, they meet again at one point upon the retina, these rays, when reflected, must, in passing out of the eye, be refracted precisely as in entering it, and can meet nowhere outside of the eye but at the point of departure.

Now, in order to see the retina of the eye of a patient, the ob-

* Helmholtz and Coccius.

server must put his own eye with reference to the patient's eye, in the same position as the visible point just spoken of. But if the observer place his eye in this position, which must be in front of the pupil, his head necessarily intercepts all the light which through the pupil could reach the portion of the retina, towards which his vision is directed. Therefore, unless from the eye of the observer enough of illuminating rays can be thrown, the retina of the patient's eye is in shadow and the pupil appears black.

Now, the ophthalmoscope does give to the eye of the observer, and its immediate surroundings, a strong illuminating power, so that the observer sees in the eye of the patient something else than the reflection of his own pupil. Thus is explained the blackness of the pupil, when looked at from in front. But if we look obliquely at a pupil, it still, for the most part, appears black, and this is because we are then looking at the anterior, lateral portions of the retina, which are cast into shadow by the iris and ciliary processes.

Some scattering light, however, from the fundus, does in that position reach the eye of the observer, and always imparts to a pupil, obliquely viewed, a light or hazy aspect, which I do not doubt has sometimes given occasion for mistaken diagnosis of cataract. It is only when obliquely viewed that the glare sometimes seen from the eyes of the inferior animals and of man becomes vivid, and it will be remembered that in the experiment of M. Brücke, already detailed, the reflection is obtained only when the eye is looked at obliquely. The explanation of this has been more briefly given by Dr. C. G. T. Ruete, when he says that "looking into the eye of another, we see reflected only the blackness of our own pupil."*

If the foregoing explanation is not understood, it will readily be so on looking at a diagram given by Dr. Anagnostakis,† and copied by others.‡

Caution in the use of the ophthalmoscope.—Its present value as a means of diagnosis, no one familiar with it can deny. Its prospective, therapeutic, practical value, cannot be doubted by any one who admits that advantage has been derived in the treatment of pulmonary and cardiac diseases from stethoscopic and *post-mortem* investigation, or who believes with Van Tright that the "*Spes therapiæ* is to be looked for only in the differential diagnosis of morbid processes and states." But if injudiciously used, it may do harm. Mr. T. Wharton Jones, in his summary of ophthalmoscopic contrivances, for the compilation of which he certainly merits the thanks of the profession, approaches, but does not touch upon, this subject, where he says, "the use of the ophthalmoscope is necessarily circumscribed by the capacity of the eye to bear the concentrated light."§ But how is this capacity to be measured?

* Bildliche Darstellung der Krankheiten des menschlichen Auges. Leipzig, b. 1, p. 24.
† Essai sur l'exploration de la retine, &c., 1854, p. 12.
‡ Med. Times and Gazette, July 1st, 1854, p. 7. Braithwaite's Retrospect, Jan., 1855, p. 179. Beitrage zur Pathologie des Auges, von Dr. Edouard Jaeger. Wein. 1855, p. 7.
§ Med. Chir. Rev., Oct., 1854.

If an eye is partially amaurotic, or, which is at present substantially equivalent to it, vision is impaired or disturbed, without any obvious* opacity of the transparent media, when and how may the ophthalmoscope be used? The liability of astronomers, sea captains and mates, microscopists, engravers, watchmakers, &c., to amaurosis, is well known. They are exposed to, or make use of, either reflected or refracted natural and artificial light.

In the ophthalmoscope artificial light alone is used, and it is always reflected. If it is reflected only as in the ophthalmoscope of Helmholtz, it is ineffective and useless in most cases for exploration of the posterior hemisphere, and for determining the state of the lens, not more decisive than the ordinary catoptric method. If the light is, besides being reflected, refracted and concentrated as in the later improvements, the instrument is unquestionably effective for examination of the posterior hemisphere, and if incautiously used when vision is not much impaired, may be considered prejudicial very nearly in proportion as it is effective.†

Still, it is very desirable to resort to it in some cases of incomplete amaurosis; but in doing so, the following should be in general excepted:

First—All cases of incomplete amaurosis which are of recent date, in which vision is but little affected, and which were preceded or at their commencement accompanied by severe pain in or near the eye, by intolerance of light, or by tenderness of the globe to pressure.

Second—Recent cases, attributable to exposure to excess of light.

Lastly—It should never be used in cases of acute inflammation of any of the textures of the eye.

And in all cases admitting a hope of recovery, the examination should not be uninterruptedly continued for more than two minutes, those cases only excepted in which there is considerable opacity either of the lens, capsule or cornea, or great insensibility to light.

A prudent regard for his own eyes also will prevent the observer prolonging in any case the examination much beyond one minute.

The consideration of cases in which the ophthalmoscope may be used will, with some colored illustrations, be reserved for another paper.‡

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* To the eye with or without a lens, or by the method of M. Sanson.

† I have quoted from myself, Boston Med. and Surg. Journal, Dec., 1854.

‡ Since the above pages were prepared, I learn from Dr. W. C. Wallace, of New York, that for more than twenty years past he has been in the habit of examining eyes by artificial light, by the aid of an apparatus similar to the magic lantern, and that although he has used it chiefly for the examination of the lens and posterior chamber of the aqueous humor, he is also able to see, imperfectly, the retina itself.

In an article by Dr. Wallace, upon the physiology and pathology of the nervous system of the eye, published in the Boston Medical and Surgical Journal, April 12, 1848, will be found (p. 209) the following remarkable passage:

"Long before the catoptric test was heard of, I was in the habit of examining patients with a magic lantern, either in a dark room or under an umbrella, with a curtain around the margin. I was enabled to recognize cases of cataracta pigmentosa, closure of the pupil, &c., which had previously been treated as amaurotic affections. With the magic lantern unaffected by adventitious light, not only may any opacity of the humors be detected, but *opaque spots may sometimes be seen on the retina.*"

Dr. Wallace also states to me, that in his long and frequent use of the intense concentrated light from this instrument, he has never seen any injurious effect.

SINGULAR MONSTROSITY.

BY J. H. LUCAS, M.D., EDGARTOWN, MARTHA'S VINEYARD.

[Communicated for the Boston Medical and Surgical Journal.]

In November, 1855, I was called to visit Mrs. ——, and found her in labor. She was not expecting to be confined for nearly two weeks.

In about two hours after my arrival, the child's head had advanced so that about one half of it protruded through the external organs; at this point it became suddenly arrested, although the pains continued, and were exceedingly powerful and forcing.

This sudden check somewhat surprised me, for the soft parts were well dilated, affording ample room; the pelvis was well formed, and the woman had, previously, at one time, a well-grown child, and, at another, a pair of twins of good size, on both of which occasions I attended her, and there was no difficulty whatever.

By encouraging the patient and keeping up her strength, I was enabled to wait several hours with things in the same state, constantly hoping that the head might advance still farther, so that I might grasp it with both hands and effect delivery; but I was finally obliged to abandon this hope, as both her strength and courage began rapidly to fail. I then applied the forceps, but found it utterly impossible to make the least progress towards delivery. I next had the patient removed from her bed, and supported in the erect posture by two strong assistants; by this means the head was protruded somewhat further beyond the pubes, and I was able to get a firmer hold upon it. My first attempt to deliver, while the woman was in this position, utterly failed, notwithstanding that I employed all the strength and weight which I could possibly bring to bear, aided, moreover, by her strong pains; but a second trial succeeded, and delivery was accomplished.

It is still a mystery and a matter of astonishment to all who have seen this child, how it could possibly have been born, having, as it did, two full-sized heads; for, of course, the last head born, fell upon the shoulder—making the diameter, through that head, both shoulders and across the breast, even when compressed, at the lowest estimate, *nine* inches.

The parents were unwilling to see the child, and gladly allowed me to preserve it for careful examination; the following enumeration of anomalies is the result of the inspection.

Sex, female: there were two well-formed *heads* and *necks;* two *spinal columns*, with an intervening space of about two inches; one *thorax;* one *abdomen;* two sets of *lungs*, which organs were inflated, by means of a quill, through each trachea; one *stomach* with two œsophagi and two pyloric orifices opening into each contiguous duodenum; two sets of *intestines*, throughout, terminating in an *anus* for each set; one *heart;* one *umbilical cord;* one *liver*, very large—probably two, blended into one; two *urinary bladders*, outlets as usual; two *uteri;* two *vaginæ*, each terminating in a sepa-

rate *os externum;* two well-proportioned *arms* and *hands*, two well-proportioned *legs* and *feet*—but, also, one small leg and foot, about one fourth the length and size of either of the others—this small leg being attached to the *sacrum*.

The *weight* of this child was about fourteen pounds.

[This monstrosity would seem to be a fusion of twins. No mention, we notice, is made of the kidneys and spleen in the enumeration of the organs; there being but one abdomen, and one liver spoken of, we conclude there was no duplication of those organs—but, from an increase in the size of the liver being noted, we suppose the same may be true of them also. It would have been, however, not unnatural to look for supernumerary *kidneys*, since it is stated that there were two *urinary bladders*.—Eds.]

Bibliographical Notices.

Sandstone Fossils of the Connecticut River. By James Deane, M.D.

We have been favored by the author with a copy of a memoir bearing the above title, illustrated by drawings on stone by his own hand. The curious impressions of the footmarks of gigantic birds, small quadrupeds and even minute insects, stamped upon what was at the time fine mud, but now the ordinary red sandstone, preserved as they have thus been, in all their details, through ages, until a mile or two of rocks and earth have accumulated over them, have justly excited amazement, and must prove most effective in demonstrating any theory of the earth's crust. Dr. Deane has been a pioneer in bringing to notice these curious relics. Living in the immediate vicinity of their location, he was among the first, if not indeed the first, to call the attention of scientific men to them, and has continued, with the zeal of an enthusiast, to collect and illustrate them. Of the scientific merits of the paper we do not presume to judge or speak; but we assume to have something of an eye for the fine arts; and we hesitate not to assert that no finer specimens of lithography have been executed any where, than these by our unapprenticed artist. Their delicacy and minuteness of detail is perfectly exquisite, and have been so pronounced by some of our best practical artists; and, that a man like our distinguished associate should have stolen time enough, and commanded patience enough, to have produced them, is a decided proof of his enthusiasm in the subject.

In connection with this notice of the scientific labors of a professional brother, we cannot forbear to allude to an impression which seems to prevail in the community, and is not unfrequently fostered by unscientific rivals, that whatever of scientific proclivities or reputation one may have, detracts just so much from his professional acquirements and his devotion to his professional duties. Nothing we believe to be further from the truth. It is professional enthusiasm which generally leads a man into an investigation of the collateral branches of natural science. They all have a direct bearing upon the great subjects of life and its development; and they all have a tendency to quicken the powers of perception and discrimination. Moreover, the time spent in such investigations is not usually drawn from the ordinary hours of labor, but from the hours when others sleep, or smoke, or lounge. Every man must and will have some by-play to his ordinary

pursuits; and what more fitting for the physician, than some line of natural science which shall illustrate his more serious and appropriate studies. Dr. Deane, one of the Vice Presidents of our State Medical Society, eminent as he is throughout his region as a physician and surgeon, is not a solitary instance of double eminence. A large proportion of our past Presidents and Vice Presidents, as well as many of the most eminent medical men in this city and other cities, have distinguished themselves in some branch of science, and we believe they will be slow to admit that the attention they have given to science has in any way tended to obscure their theoretical views, to diminish the accuracy of their discrimination in disease, their curative resources, their practical tact in the management of the sick, or their habits of systematic and serious application. Nor do we believe that any one will sincerely maintain the contrary. Then let no one, either from envy or interest, avail himself of popular prejudice, to the detriment of his more scientific brother.

Neligan's Atlas of Cutaneous Diseases.

The plates embraced in this Atlas are sufficiently numerous for all practical purposes, and the varieties of skin diseases represented, show very clearly that the learned author has enjoyed ample opportunity for studying almost every form of cutaneous malady. In regard to the Atlas before us, we consider it right to say, that it is on too small a scale to afford the medical student or the junior practitioner any very important assistance in his efforts to distinguish one form of eruption from another. If he is in the dark in the matter of diagnosis, he will not be able, in our estimation, to derive any great amount of light from the book of plates we now refer to, and for the simple reason that the different representations of the diseases of the skin are on too small a scale. This miniature likeness makes the eruptions look too much alike, and it renders it impossible to impart the true and peculiar coloring which should characterize the several plates, in order that these plates should be a fair picture of what we find when we look at the living specimens. We could easily point out other important defects. We are sorry to say, that notwithstanding the cheapness of price, the work in question cannot claim to be a faithful and useful guide. We have a high regard for Neligan himself, as a learned and accurate dermatologist; and we therefore regret the more that he should have spent his time and labor on a volume which cannot reflect credit upon him, nor serve a valuable purpose to any one else. S. D.

The Principles and Practice of Ophthalmic Medicine and Surgery. By T. Wharton Jones, F.R.S., Professor of Ophthalmic Medicine and Surgery in University College, London; Ophthalmic Surgeon to the Hospital, &c. With one hundred and ten Illustrations. Second American Edition, with Additions, from the second and revised London Edition. Philadelphia: Blanchard & Lea. 1856. 12 mo. pp. 500.

Mr. T. W. Jones's manual is too well known to require more than the announcement of a new edition, to insure its rapid sale. The present issue is edited by Dr. Edward Hartshorne, whose practical acquaintance with ophthalmic medicine renders him peculiarly fitted for the task. The second London edition, from which this is taken, has been improved and enlarged by the author, in order to bring it up to the present state of the science in the department of which it treats. We recommend the work as one of the most valuable and useful to the student or practitioner, on the subject of

diseases of the eye. The volume is of convenient size, is neatly printed, and illustrated with excellent engravings.

For sale in Boston by Sanborn, Carter & Bazin, and by Ticknor & Co.

Cases in Midwifery, with Remarks. By Thos. F. Cock, M.D., Physician to the New York Hospital. Reprinted from the New York Journal of Medicine. 1855. pp. 40.

It is seldom we get more of value in forty pages than we do in this pamphlet. The cases are admirably presented—nothing omitted in them necessary to their clear apprehension, and yet very concisely stated. The classification, too, is without pedantic minuteness, yet all sufficient for purposes of generalization. Dr. C.'s "fifteen years of professional experience" have been turned to good account. Among the cases we find many points worthy of notice, but must confine ourselves to the following:—

Convulsions.—Urine noted in five cases; in all, albuminous. Query: would not this symptom be found as occurring very frequently, if note were made, even where no morbid symptom is exhibited?

Hemorrhage.—Case II. H., before labor, resembles one which occurred to us, but with a more unfavorable termination. We have seen only five recorded as yet, in English and Continental periodicals. The placenta became entirely detached; there was no external hemorrhage; no dilatation of the os uteri; no pain; no attempt at labor. A gallon of blood was found in the uterus. In Dr. C.'s case, labor fortunately commenced in time, and was successfully terminated.

Placenta Prævia.—We see alum injections and alum plugs were resorted to. We do not doubt, that to gain a little time, they may occasionally serve; but we have always regarded them, as well as the tampon, as tending to lead the attendant into a misplaced sense of security. We never feel any confidence until the pains are active and labor progressing; and we have seen several instances where the patient was nearly lost by the trust given to temporizing means.

Twins.—Case 4—where, after the birth of one child, labor ceased for forty-eight hours—is interesting, and still leaves the historian a theory of the "man with the iron mask," which has been denied as utterly untenable.

Forceps Cases.—These confirm views which we have entertained for some time, and in which we are becoming more and more strengthened: viz., that the forceps might be resorted to without damage and with advantage, much oftener than they are. We do not mean to depreciate the often-appealed-to "Nature;" but when she is evidently deficient, and is leaving our patient in suffering too long, endangering the life of an infant, she must not be permitted to have her own way. For instance, in Case I., a *primapara*, twenty-eight hours in labor, for eight of which, the head rested on the perinæum. Forceps successfully resorted to. We should like to have spared five of the last eight hours. In Case III., no progress for eleven hours: then the forceps. Case XI., head in inferior strait for twelve hours—no advance: forceps after four hours more. Now in these, and all such cases, why should the use of the forceps be postponed so long? We consider three hours fully long enough to wait, and then, if other indications approve, forceps should be used. As to their danger, in the hands of one sufficiently skilled for his occupation, there is none to the mother; and what might be done to the child, is nothing more than what a few additional hours of protracted labor will do. This we say in spite of what Smellie,

Gooch, Dewees and many others say, and very positively too, to the contrary; but our own experience urges us to it, and we are glad to find it backed by that of some of the most practiced and cautious amongst us, of greater years.

About the kind of forceps, a few words. Dr. Cock uses the long forceps. We did, formerly, but now prefer, by far, the short Smellie's, with Davis's improvement. The long ones are more alarming—in Baudelocque's, with the recent improvements, eighteen inches of steel. They also require more preparation of the patient—getting her to the edge of the bed, &c. The short ones, less in length by six or seven inches, are more modest and quiet looking, and we seldom find it necessary to alter the position of the patient greatly. With care and a little practice, they can reach a child, in most cases, as far up as it is ever desirable to use such assistance. We remember, a few months since, taking an infant through the superior strait without great embarrassment, though the position of the head was an abnormal one.

W. E. C.

Materia Medica, or Pharmacology and Therapeutics. By William Tully, M.D. Vol. I., No. 16. February, 1856. Springfield, Mass. Published by Jefferson Church, M.D. pp. 925—1026 inclusive.

We receive the numbers of this learned work regularly. Number 16 of Vol. I. is now before us, bearing date February, 1856; its contents are comprised under the title "Proëm to the Class Euphraenica (continued)." Notwithstanding the work is in some parts rather too abstruse for every-day readers, it is certainly a mine of information, and its examination will well repay those who undertake it. We observe a great deal that is practically useful, and the sound sense and judgment of the author are manifest throughout. The quaintness of expression and peculiarity in spelling lend a spice of interest to the composition.

The type and paper are good, and if a little more care be taken with the proofs, the volume, when completed, will be very sightly as well as valuable. Nearly all the numbers have several slight typographical errors which might easily be avoided. The numbers can be procured by mail from the publisher.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON, JUNE 26, 1856.

THE TREATMENT OF CANCRUM ORIS.

In the *Glasgow Medical Journal* for April, 1856, Dr. James Gray announces a treatment for this disease, which he considers, although comparatively simple if the case be early undertaken, previously to exhaustion, is yet very efficacious. He founds his therapeutics upon the following theory, which he elucidates by physiological deductions, and supports, both positively and negatively, by the details of three cases, so far as they may be deemed sufficient to ratify a conclusion.

After saying that the disease is by no means confined to the children of the poor or to those who live in insalubrious districts, he refers to the fact that all the recorded cases, as well as those which have occurred in his own practice, "have been preceded by some other malady, as measles, croup,

whooping cough, &c., followed by bilious diarrhœa, the effect of which is to drain the liver of the secretion which must be supplied to that organ from the disintegration of the tissues, the sulphur of which goes to the production of bile; and where the supply of food, from loss of appetite, or any other cause, is not equal to the demand, ulcerative absorption is the consequence." If this very plausible view can be sustained, certainly it would seem that the treatment is very clearly indicated. Dr. Gray goes on to state the fact that sulphur enters into all the tissues of the body, as a formative element, and is found in the urine and saliva; while it was ascertained by Gorup-Besanez that it is found in the composition of epithelium in the proportion of 2½ *per cent.*; taurine, according to Redtenbacher, contains 26 *per cent.* of it. "In death from starvation," continues Dr. G., "the gall-bladder is found distended with bile; thus proving that this secretion is derived from the metamorphosis of the tissues." The waxy or dusky appearance of the skin, the clay-colored stools and frequently constipated bowels of patients about to be attacked with *cancrum oris*, are sufficiently indicative of hepatic difficulty. Dr. Gray, in two of the three cases he reports, tried the usual methods of treatment unavailingly; in both patients extensive ulceration of the cheeks was followed by death in a short time. In the third case, treated by his own method, recovery ensued. Out of nine cases, in his own practice, four, treated in the ordinary mode, terminated fatally, while the other five patients, differently managed (according to the deductions from the theory above enunciated), all recovered; certainly a very marked result, and apparently referrible to the treatment.

Dr. Gray very sensibly, as we think, opposes the use of leeches and mercury; we can hardly conceive of an instance in which either would be productive of aught but harm. Iodine, he has found of no service, nor has chlorate of potassa succeeded in his hands. We quote his recommendations, and hope that a trial may be made of them in cases of this confessedly fearful and rebellious affection.

"The treatment which I have found, from personal experience, most successful, consists in the local application of a solution of the biborate of soda, which acts, I believe, in neutralizing the sulphuric acid formed by the action of the oxygen of the peroxide of iron of the blood on the sulphur of the tissues.

"The constitutional remedies are—

"*First*—The tincture of aconite (Fleming's), in the proportion of six drops to the two ounces of water, of which mixture a teaspoonful is to be given every three or four hours, to subdue the vascular excitement which always prevails at the commencement of this disease.

"*Second*—The tincture of nux vomica, in drop doses, is afterwards administered, to stimulate, through the medium of the nervous system, the secreting vessels of the liver, as also to prevent the deposition of the triple phosphate.

"*Third*—The exhibition of sulphur, either in the form of milk of sulphur, or the sulphate of potass with sulphur, to supply the system with this element, in which it is deficient.

"The diet should consist chiefly of the cold infusion of meat, yolk of egg, fish, and the hydro-carbonaceous substances."

In a case of ulcerative stomatitis recently under our care, and where *cancrum oris* was at one time apprehended, the chlorate of potassa, used externally and internally, acted like a charm in arresting the ulcerative process. The patient was a little girl about 4 years of age, naturally very delicate,

and recovering from a severe attack of measles. In the centre of the right cheek, a circumscribed swelling of the size of a quarter-dollar arose, and assumed a very dark-red color; ulceration was discovered on the inside of the cheek opposite the centre of this swelling. The right upper incisor and bicuspid teeth became loose and were removed, in consequence of ulceration of the gums; the lower gums were much ulcerated; the child was very weak and racked by a cough, which accompanied the rubeola throughout. The chlorate of potassa was immediately and perseveringly used, and in three days an astonishing improvement had taken place. In our opinion, perforation of the cheek, and very destructive, if not fatal, injury would soon have resulted, but for this, or some other potent remedy. Cod-liver oil was given at the same time, but of course the immediate improvement cannot be referred to that agent. The child grew well rapidly, and, by a continuance of the oil and good diet, became stronger and better than she had ever previously been. There is much testimony from the highest authorities to the efficacy of the above salt in actual or in threatened *cancrum oris*.

Professor Miller, at a meeting of the Medico-Chirurgical Society of Edinburgh, read the history of a case of obstruction of the pulmonary artery in an elderly gentleman, who had died rather suddenly, and exhibited symptoms which seemed, in the opinion of Prof. M., referrible to the formation, during life, of the clot, which was found completely obstructing the pulmonary artery. The paper was illustrated by a preparation of the parts. The cases recorded by Mr. Paget, in his paper in the *Medico-Chirurgical Transactions* (vol. xxvii., p. 163), were referred to, but in none of these was there the complete obstruction of the vessel which this case exhibited.—*Edinburgh Medical and Surgical Journal.*

Appointments in London.—We are glad to announce the appointments of Mr. Owen as Superintendent of the Natural History Department of the British Museum, at a salary of £800; and of Mr. Quekett as Professor of Histology and Conservator of the Museum of the Royal College of Surgeons.—*Ibid.*

Professor Jeffries Wyman has been elected President of the Boston Society of Natural History, in place of the late Dr. J. C. Warren. The appointment is universally approved.

Erratum.—In the last No, p. 403, twenty-fifth line from the top, for *intermittent* read *intercurrent*.

Married.—In Cambridge, 17th inst., Dr. A. L. Leland, of Detroit, Mich, to Sarah Elizabeth Livermore.—In Belville, N. J., Dr. Frederick A. Smith, of Peterborough, N. H., to Miss Frances Gregg, of B.

Died.—In Beverly, 17th inst., Dr. Ingalls Kittredge, 36 years, 6 mos.—In Haverhill, 13th inst., D. Fayette Ayer, M.D., 31 years, 4 mos.—In Pepperell, 14th inst., Ebenezer Lawrence, M.D., aged 86, a distinguished physician for more than half a century in Hampton, N. H.

Deaths in Boston for the week ending Saturday noon, June 21st, 64. Males, 38—females, 26. Accident, 1—anæmia, 1—inflammation of the brain, 2—disease of the brain, 2—consumption, 11—convulsions, 1—croup, 1—dropsy, 1—dropsy in the head, 5—drowned, 1—debility, 1—infantile diseases, 3—epilepsy, 1—erysipelas, 1—typhus fever, 2—typhoid fever, 1—scarlet fever, 4—fracture, 1—disease of the heart, 2—intemperance, 3—inflammation of the lungs, 2—marasmus, 3—measles, 4—pleurisy, 2—disease of the spine, 2—scrofula, 1—smallpox, 2—teething, 1—unknown, 2.

Under 5 years, 27—between 5 and 20 years, 5—between 20 and 40 years, 18—between 40 and 60 years, 6—above 60 years, 8. Born in the United States, 51—Ireland, 11—England, 1—British Provinces, 1.

Maine Medical Association.—This Association held its fourth annual meeting, June 4th and 5th, at Bangor, Me. On this occasion, the following gentlemen were elected officers for the ensuing year.

President—Hosea Rich, Bangor.

Vice Presidents—James Bates, Fairfield; and Alonzo Garcelon, Lewiston.

Recording Secretary—J. C. Weston, Bangor.

Corresponding Secretary—A. J. Fuller, Bath.

Treasurer—J. W. Ellis, Augusta.

Standing Committee—T. G. Stockbridge, Bath; S. H. Tewksbury, Portland; Alpheus F. Page, Bucksport; J. C. Bradbury, Oldtown; John Benson, Newport; A. R. Boutelle, Waterville; A. Libby, Richmond; E. F. Sanger, Ellsworth; Geo. Holmes, Belmont; W. A. Rust, Paris; Charles E. Swan, Calais; Preston S. Fisher, Corinna; G. A. Wilbur, Skowhegan; J. D. Lincoln, Brunswick; and J. S. Goodwin, Saco.

S. H. Tewksbury, Cumberland County; A. J. Fuller, Sagadahoc; B. F. Wiggin, Androscoggin; J. W. Ellis, Kennebec; J. Bates, Somerset; N. P. Monroe, Waldo; P. Fisher, Piscataquis; C. E. Swan, Washington; E. F. Sanger, Hancock; E. Russel, Franklin; E. D. French, Aroostook; E. G. Stevens, York; W. A. Rust, Oxford, and B. F. Buxton, Lincoln, were selected to report, during the year, on the Medical Topography and Epidemic Diseases of their respective Counties, with the most successful treatment thereof, to J. C. Weston, and thus enable him to prepare and present a full report on those subjects to the American Medical Association. Dr. Alonzo Garcelon was selected to deliver the next annual address, and Lewiston as the place of meeting.

On the first evening of this anniversary, the medical gentlemen of Bangor and vicinity gave a collation to the Association, at which there was a free interchange of views, and humorous, eloquent and practical speeches were made by many members, and gentlemen of the press who were invited guests, in which the best spirit was manifested, and much encouragement derived for the prosperity and usefulness of the Association.

There was only one cause of regret at this meeting:—through some misunderstanding as to the proper officer to notify the Orator of his election, he was not apprized in season, and consequently we were deprived of the usual annual address, but the time was fully occupied by appropriate discussions and extempore addresses.

This Society now includes among its members nearly two hundred physicians, and this year it was represented in the American Medical Association, at Detroit, by nine Delegates. Its past course proves that it has not only a name to live, but a real vitality. The oldest physicians, as well as the youngest, have been present at its yearly sessions, all animated with an equal zeal and interest in its discussions and deliberations. These meetings have given life and a high tone to the profession. Each member is no longer isolated, but meets his brethren on these occasions, and cultivates a spirit of sympathy, kindness and harmony. From this union we have derived strength; knowledge has been imparted, and scientific men are better appreciated and rewarded by the community.

The results thus far give promise that this Association will accomplish in future for us what similar institutions have effected for older States, and it is hoped that every physician in our State will hasten to avail himself of its advantages.

J. C. Weston, *Recording Sec'y.*

Dr. S. D. Gross, Professor of the Principles and Practice of Surgery, in the University of Louisville, has been unanimously elected by the Trustees of the Jefferson Medical College to fill the Chair made vacant by the resignation of Dr. Mutter. Dr. Gross's reputation is so widely extended, and his ability so well known to the profession, that we shall make no comments upon them. His appointment cannot fail to give general satisfaction.—*Medical Examiner.*

Bleeding at the Lungs.—M. Aran condemns the employment of bleeding in this affection, and considers the essence of turpentine, in ten to thirty drops every hour, a valuable remedy. He speaks highly of gallic acid, in doses of two grains every hour, or every alternate hour.